

Number of

Estimated

Path



July 2003

Time Local/ Path Length Persons Width Damage Character of Storm LAKE ERIE **Avon Point To Willowick Oh LEZ146** 1200EST 1400EST Avon Point to Willowick 0 Marine Tstm Wind (EG35) Le Avon Pt To Willowick Oh Byd 5Nm Offshore To Intl Border LEZ166 Avon Point to Willowick 1200EST Marine Tstm Wind (EG35) 1400EST **LEZ163** Le Reno Beach To The Islands Oh Byd 5Nm Offshore To Intl Border Marine Tstm Wind (EG35) Reno Beach to The Islands **LEZ164** Le The Islands To Vermilion Oh Byd 5Nm Offshore To Intl Border 1200EST 1400EST The Islands to Marine Tstm Wind (EG35) Vermilion **LEZ165** Le Vermilion To Avon Pt Oh Byd 5Nm Offshore To Intl Border Vermilion to Avon Point Marine Tstm Wind (EG35) LEZ142 Maumee Bay To Reno Beach Oh 1200EST Maumee Bay to 0 Marine Tstm Wind (EG35) 0 Reno Beach 1400EST **LEZ143** Reno Beach To The Islands Oh Reno Beach to The Islands 1200EST 1400EST 0 0 Marine Tstm Wind (EG35) LEZ144 The Islands To Vermilion Oh The Islands to 1200EST 1400EST Marine Tstm Wind (EG35) Vermilion **LEZ145** Vermilion To Avon Point Oh Vermilion to Avon Point 1200EST 1400EST 04 0 0 Marine Tstm Wind (EG35) A line of strong thunderstorms moved quickly east across Lake Erie and produced wind gusts in excess of 35 knots **LEZ146** Avon Point To Willowick Oh Avon Point to Willowick 1400EST Marine Tstm Wind (EG35) 1530EST Le Avon Pt To Willowick Oh Byd 5Nm Offshore To Intl Border Avon Point to Willowick Marine Tstm Wind (EG35) Le Reno Beach To The Islands Oh Byd 5Nm Offshore To Intl Border **LEZ163** Reno Beach to The Islands 1400EST 1530EST Marine Tstm Wind (EG35) Le The Islands To Vermilion Oh Byd 5Nm Offshore To Intl Border LEZ164 1400EST 1530EST The Islands to Marine Tstm Wind (EG35) 04 Vermilion **LEZ165** Le Vermilion To Avon Pt Oh Byd 5Nm Offshore To Intl Border 1400EST 1530EST Vermilion to 04 Marine Tstm Wind (EG35) **Avon Point** Le Willowick To Geneva On The Lake Oh Byd 5Nm Offshore To Intl Border 1400EST 1530EST Willowick to Marine Tstm Wind (EG35) Geneva-On-The-Lake Reno Beach To The Islands Oh LE7143 1400EST 1530EST Reno Beach to 0 0 Marine Tstm Wind (EG35) The Islands LEZ144 The Islands To Vermilion Oh 1400EST 1530EST The Islands to Marine Tstm Wind (EG35) 0 0 04 Vermilion **LEZ145** Vermilion To Avon Point Oh 1400EST Vermilion to 04 0 Marine Tstm Wind (EG35) 1530EST





Time Local/ Length Width Persons Damage
Location Date Standard (Miles) (Yards) Killed Injured Property Crops Character of Storm

LAKE ERIE

LEZ147	Willow	vick To Geneva On The Lake Oh			
Willowick to Geneva-On-The-Lake	04	1400EST 1530EST	0	0	Marine Tstm Wind (EG35)
Geneva on the Lake	A line	of strong thunderstorms moved east across La	ke Erie and	produced wind gusts in excess	s of 35 knots.
LEZ146		Point To Willowick Oh			
Avon Point to Willowick	04	1515EST 1645EST	0	0	Marine Tstm Wind (EG35)
LEZ149	Conne	aut Oh To Ripley Ny			
Ripley Ny	04	1515EST 1645EST	0	0	Marine Tstm Wind (EG35)
LEZ148	Genev	a On The Lake Oh To Conneaut Oh			
Geneva-On-The-Lake to	04	1515EST	0	0	Marine Tstm Wind (EG35)
Conneaut	T - A	1645EST	. T41 D	.3	
LEZ166 Avon Point to	04	on Pt To Willowick Oh Byd 5Nm Offshore T 1515EST	0 mu b or	0	Marine Tstm Wind (EG35)
Willowick		1645EŠT			
LEZ169	Le Cor 04	nneaut Oh To Ripley Ny Byd 5Nm Offshore	To Intl Bo	order 0	Manina Tatus Wind (EC25)
Conneaut to Ripley Ny	04	1515EST 1645EST	U	U	Marine Tstm Wind (EG35)
LEZ168		neva On The Lake To Conneaut Oh Byd 5N			
Geneva-On-The-Lake to Conneaut	04	1515EST 1645EST	0	0	Marine Tstm Wind (EG35)
LEZ167	Le Wil	lowick To Geneva On The Lake Oh Byd 5N	m Offshor	re To Intl Border	
Willowick to Geneva-On-The-Lake	04	1515EST 1645EST	0	0	Marine Tstm Wind (EG35)
LEZ147	Willow	rick To Geneva On The Lake Oh			
Willowick to Geneva-On-The-Lake	04	1515EST 1645EST	0	0	Marine Tstm Wind (EG35)
	A line	of strong thunderstorms moved east across La	ke Erie and	produced wind gusts in excess	s of 35 knots.
LEZ146		Point To Willowick Oh		•	1
Avon Point to Willowick	05	1100EST 1215EST	0	0	Marine Tstm Wind (EG35)
LEZ166	Le Avo	on Pt To Willowick Oh Byd 5Nm Offshore T	o Intl Bor	der	
Avon Point to Willowick	05	1100EST 1215EST	0	0	Marine Tstm Wind (EG35)
LEZ164	Le The	e Islands To Vermilion Oh Byd 5Nm Offsho	re To Intl	Border	
The Islands to Vermilion	05	1100EST 1215EST	0	0	Marine Tstm Wind (EG35)
LEZ165	Le Ver	emilion To Avon Pt Oh Byd 5Nm Offshore	o Intl Ror	der	
Vermilion to		1100EST	0	0	Marine Tstm Wind (EG35)
Avon Point	m	1215EST			
LEZ144 The Islands to	05	lands To Vermilion Oh 1100EST	0	0	Marine Tstm Wind (EG35)
Vermilion	02	1215EST	Ü	v	marine 15th (ma (2000)
LEZ145		lion To Avon Point Oh			N
Vermilion to Avon Point	05	1100EST 1215EST	0	0	Marine Tstm Wind (EG35)
	Thund	erstorms moved east across Lake Erie and pro-	duced wind	gusts in excess of 35 knots.	
LEZ146		Point To Willowick Oh	0	0	M T.A., W. 1 (E025)
Avon Point to Willowick	07	1230EST 1400EST	0	0	Marine Tstm Wind (EG35)
LEZ166		on Pt To Willowick Oh Byd 5Nm Offshore T		der	
Avon Point to	07	1230EST	0	0	Marine Tstm Wind (EG35)





Marine Tstm Wind (EG35)

July 2003 Time Local/ Path Length Path Number of Estimated Persons Width Damage LAKE ERIE Willowick 1400EST LEZ162 Le Detroit R Lt To Reno Beach Oh Byd 5Nm Offshore To Intl Border Maumee Bay to Reno Beach Marine Tstm Wind (EG35) LEZ163 Le Reno Beach To The Islands Oh Byd 5Nm Offshore To Intl Border Reno Beach to Marine Tstm Wind (EG35) The Islands **LEZ164** Le The Islands To Vermilion Oh Byd 5Nm Offshore To Intl Border 1230EST 1400EST Marine Tstm Wind (EG35) The Islands to Vermilion Le Vermilion To Avon Pt Oh Byd 5Nm Offshore To Intl Border 1230EST 1400EST Vermilion to Marine Tstm Wind (EG35) Avon Point LEZ142 Maumee Bay To Reno Beach Oh 1230EST 1400EST Maumee Bay to Reno Beach 0 0 Marine Tstm Wind (EG35) Reno Beach To The Islands Oh **LEZ143** Reno Beach to The Islands 1230EST 1400EST 0 0 Marine Tstm Wind (EG35) The Islands To Vermilion Oh LEZ144 1230EST 1400EST The Islands to 0 Marine Tstm Wind (EG35) Vermilion **Vermilion To Avon Point Oh** 1230EST 1400EST Vermilion to 0 Marine Tstm Wind (EG35) **Avon Point** A line of strong thunderstorms moved east across Lake Erie and produced wind gusts in excess of 35 knots. **LEZ146** Avon Point To Willowick Oh Avon Point to Willowick 2015EST 2145EST 0 Marine Tstm Wind (EG35) Le Avon Pt To Willowick Oh Byd 5Nm Offshore To Intl Border Avon Point to Willowick Marine Tstm Wind (EG35) **LEZ165** Le Vermilion To Avon Pt Oh Byd 5Nm Offshore To Intl Border 2015EST 2145EST Vermilion to Marine Tstm Wind (EG35) **Avon Point** Le Willowick To Geneva On The Lake Oh Byd 5Nm Offshore To Intl Border Willowick to Geneva-On-The-Lake 07 Marine Tstm Wind (EG35) Vermilion To Avon Point Oh Vermilion to 07 2015EST 2145EST 0 0 Marine Tstm Wind (EG35) Avon Point Willowick To Geneva On The Lake Oh Willowick to 2015EST Marine Tstm Wind (EG35) Geneva-On-The-Lake 2145EST Strong thunderstorms moved east across Lake Erie and produced wind gusts in excess of 35 knots. **LEZ162** Le Detroit R Lt To Reno Beach Oh Byd 5Nm Offshore To Intl Border Maumee Bay to 0320EST 0500EST Marine Tstm Wind (EG35) Reno Beach Le Reno Beach To The Islands Oh Byd 5Nm Offshore To Intl Border 0320EST 0500EST Reno Beach to 08 Marine Tstm Wind (EG35) The Islands Le The Islands To Vermilion Oh Byd 5Nm Offshore To Intl Border

0320EST 0500EST

08

The Islands to

Vermilion



Number of

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Path



July 2003

Time Local/ Path Length Persons Width Damage LAKE ERIE LEZ165 Le Vermilion To Avon Pt Oh Byd 5Nm Offshore To Intl Border 0320EST 0500EST Vermilion to Marine Tstm Wind (EG35) Avon Point LEZ142 Maumee Bay To Reno Beach Oh Maumee Bay to 08 0320EST 0 0 Marine Tstm Wind (EG35) Reno Beach 0500EST **LEZ143** Reno Beach To The Islands Oh 0320EST 0500EST Marine Tstm Wind (EG35) Reno Beach to 0 The Islands **LEZ144** The Islands To Vermilion Oh 0320EST 0500EST The Islands to 0 Marine Tstm Wind (EG35) Vermilion LEZ145 Vermilion To Avon Point Oh Vermilion to Avon Point 0320EST 0500EST O 0 Marine Tstm Wind (EG35) A line of strong to severe thunderstorms moved east across Lake Erie and produced wind gusts in excess of 35 knots. **LEZ146** Avon Point To Willowick Oh Avon Point to Willowick 0400EST 0 Marine Tstm Wind (EG35) 0530EST **LEZ149** Conneaut Oh To Ripley Ny 0400EST 0530EST Ripley Ny 0 Marine Tstm Wind (EG35) LEZ148 Geneva On The Lake Oh To Conneaut Oh 0400EST 0530EST Geneva-On-The-Lake to 0 Marine Tstm Wind (EG35) Conneaut Le Avon Pt To Willowick Oh Byd 5Nm Offshore To Intl Border LEZ166 Avon Point to Willowick 0400EST 0530EST Marine Tstm Wind (EG35) **LEZ169** Le Conneaut Oh To Ripley Ny Byd 5Nm Offshore To Intl Border 08 0400EST Marine Tstm Wind (EG35) Conneaut to Ripley Ny 0530EST **LEZ168** Le Geneva On The Lake To Conneaut Oh Byd 5Nm Offshore To Intl Border Geneva-On-The-Lake to Conneaut Marine Tstm Wind (EG35) Le Willowick To Geneva On The Lake Oh Byd 5Nm Offshore To Intl Border LEZ167 Willowick to Geneva-On-The-Lake 0400EST 0530EST Marine Tstm Wind (EG35) 08 Willowick To Geneva On The Lake Oh Willowick to 0400EST 0 08 0 Marine Tstm Wind (EG35) Geneva-On-The-Lake A line of strong to severe thunderstorms moved east across Lake Erie and produced wind gusts in excess of 35 knots. **LEZ162** Le Detroit R Lt To Reno Beach Oh Byd 5Nm Offshore To Intl Border Maumee Bay to Reno Beach 1400EST 1530EST Marine Tstm Wind (EG35) Le Reno Beach To The Islands Oh Byd 5Nm Offshore To Intl Border LEZ163 Reno Beach to The Islands 08 Marine Tstm Wind (EG35) LEZ164 Le The Islands To Vermilion Oh Byd 5Nm Offshore To Intl Border The Islands 1400EST 1530EST Marine Tstm Wind (EG35) 08 Maumee Bay To Reno Beach Oh **LEZ142** 1400EST 1530EST Maumee Bay to 0 0 Marine Tstm Wind (EG35) Reno Beach





		Time Local/	Path Length	Path Width		ber of	Estimated Damage	July 2003
Location	Date	Standard	(Miles)	(Yards)	Killed	Injured	Property Crops	Character of Storm
LAKE ERIE								
LEZ143	Reno	Beach To The Is	lands Oh					
Reno Beach to The Islands	08	1400EST 1530EST			0	0		Marine Tstm Wind (EG35)
LEZ144		slands To Vermi	lion Oh		•			M. 1. T. (W. 1.75025)
The Islands to Vermilion	08	1400EST 1530EST			0	0		Marine Tstm Wind (EG35)
	A line	of strong thunde	rstorms moved	l east across	Lake Erie	and produc	ed wind gusts in exces	ss of 35 knots.
LEZ165	Le Ve	rmilion To Avor	n Pt Oh Byd 5	Nm Offshor	e To Intl I	Border		
Vermilion to Avon Point	10	1120EST 1210EST			0	0		Marine Tstm Wind (EG35)
LEZ144	The Is	slands To Vermi	lion Oh					
The Islands to Vermilion	10	1120EST 1210EST			0	0		Marine Tstm Wind (EG35)
LEZ145		ilion To Avon Po	oint Oh					
Vermilion to Avon Point	10	1120EST 1210EST			0	0		Marine Tstm Wind (EG35)
	Strong	g thunderstorms r	noved north ac	ross Lake E	rie and prod	duced wind	gusts in excess of 35	knots.
LEZ146	Avon	Point To Willow	rick Oh					
Avon Point to Willowick	10	1200EST 1330EST			0	0		Marine Tstm Wind (EG35)
LEZ166	Le Av	on Pt To Willow	rick Oh Byd 5	Nm Offshor	e To Intl I	Border		
Avon Point to Willowick	10	1200EST 1330EST			0	0		Marine Tstm Wind (EG35)
LEZ167	Le Wi	llowick To Gene	eva On The L	ake Oh Byd	5Nm Offs	hore To In	tl Border	
Willowick to Geneva-On-The-Lake	10	1200EST 1330EST			0	0		Marine Tstm Wind (EG35)
LEZ147		wick To Geneva	On The Lake	Oh				
Willowick to Geneva-On-The-Lake	10	1200EST 1330EST			0	0		Marine Tstm Wind (EG35)
	Strong	g thunderstorms r	noved quickly	northeast ac	ross Lake I	Erie and pro	oduced wind gusts in e	excess of 35 knots.
LEZ146	Avon	Point To Willow	rick Oh					
Avon Point to Willowick	21	0115EST 0245EST			0	0		Marine Tstm Wind (EG35)
LEZ148	Genev	a On The Lake	Oh To Conne	aut Oh				
Geneva-On-The-Lake to Conneaut	21	0115EST 0245EST			0	0		Marine Tstm Wind (EG35)
LEZ166	Le Av	on Pt To Willow	rick Oh Byd 5	Nm Offshor	e To Intl I	Border		
Avon Point to Willowick	21	0115EST 0245EST			0	0		Marine Tstm Wind (EG35)
LEZ162	Le De	troit R Lt To Re	no Beach Oh	Byd 5Nm O	ffshore To		er	
Maumee Bay to Reno Beach	21	0115EST 0245EST			0	0		Marine Tstm Wind (EG35)
LEZ168		neva On The La	ke To Conne	aut Oh Byd			tl Border	M. 1. T. (W. 1.75025)
Geneva-On-The-Lake to Conneaut	21	0115EST 0245EST			0	0		Marine Tstm Wind (EG35)
LEZ163	Le Re	no Beach To Th 0115EST	e Islands Oh	Byd 5Nm Of	ffshore To 0	Intl Borde	er	Marina Tetm Wind (EC25)
Reno Beach to The Islands	41	0115ES1 0245EST			U	U		Marine Tstm Wind (EG35)
LEZ164	Le Th 21	e Islands To Vei	rmilion Oh By	d 5Nm Offs	shore To II 0	ntl Border 0		Marina Tetm Wind (EC25)
The Islands to Vermilion	41	0115EST 0245EST			U	U		Marine Tstm Wind (EG35)



Reno Beach to

The Islands

21

1815EST

National Weather Service Storm Data and Unusual Weather Phenomena



Marine Tstm Wind (EG35)

July 2003 Time Local/ Path Length Path Number of Estimated Persons Width Damage LAKE ERIE LEZ165 Le Vermilion To Avon Pt Oh Byd 5Nm Offshore To Intl Border Vermilion to Marine Tstm Wind (EG35) Avon Point Le Willowick To Geneva On The Lake Oh Byd 5Nm Offshore To Intl Border LEZ167 Willowick to Marine Tstm Wind (EG35) Geneva-On-The-Lake 0245EST LEZ142 Maumee Bay To Reno Beach Oh Maumee Bay to Marine Tstm Wind (EG35) 0 0 Reno Beach **LEZ143** Reno Beach To The Islands Oh Reno Beach to 0115EST 0 Marine Tstm Wind (EG35) 0245EST The Islands The Islands To Vermilion Oh LEZ144 The Islands to Vermilion 0115EST 0245EST O 0 Marine Tstm Wind (EG35) LEZ145 Vermilion To Avon Point Oh Vermilion to 0115EST 0 Marine Tstm Wind (EG35) 0 **Avon Point** LEZ147 Willowick To Geneva On The Lake Oh Willowick to Geneva-On-The-Lake 0 Marine Tstm Wind (EG35) Strong thunderstorms moved east across Lake Erie and produced wind gusts in excess of 35 knots. LEZ146 **Avon Point To Willowick Oh** 0430EST 0600EST Avon Point to Willowick 0 0 Marine Tstm Wind (EG35) Le Avon Pt To Willowick Oh Byd 5Nm Offshore To Intl Border LEZ166 Avon Point to Willowick 0430EST 0600EST Marine Tstm Wind (EG35) **LEZ164** Le The Islands To Vermilion Oh Byd 5Nm Offshore To Intl Border The Islands to 0430EST Marine Tstm Wind (EG35) Vermilion 0600EST **LEZ165** Le Vermilion To Avon Pt Oh Byd 5Nm Offshore To Intl Border Vermilion to Avon Point Marine Tstm Wind (EG35) Le Willowick To Geneva On The Lake Oh Byd 5Nm Offshore To Intl Border LEZ167 Willowick to Geneva-On-The-Lake 0430EST 0600EST Marine Tstm Wind (EG35) 21 The Islands To Vermilion Oh 0430EST 0600EST 21 The Islands to 0 0 Marine Tstm Wind (EG35) Vermilion Vermilion To Avon Point Oh Vermilion to 21 0430EST O 0 Marine Tstm Wind (EG35) **Avon Point** 0600EST Willowick To Geneva On The Lake Oh Willowick to 0430EST Marine Tstm Wind (EG35) Geneva-On-The-Lake 0600EST Strong thunderstorms moved east across Lake Erie and produced wind gusts in excess of 35 knots. **LEZ166** Le Avon Pt To Willowick Oh Byd 5Nm Offshore To Intl Border Avon Point to Willowick 1630EST 1815EST Marine Tstm Wind (EG35) 21 Le Reno Beach To The Islands Oh Byd 5Nm Offshore To Intl Border



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Time Local/ Path Length Persons Width Damage Character of Storm LAKE ERIE LEZ164 Le The Islands To Vermilion Oh Byd 5Nm Offshore To Intl Border The Islands to Marine Tstm Wind (EG35) Vermilion LEZ165 Le Vermilion To Avon Pt Oh Byd 5Nm Offshore To Intl Border Vermilion to 21 1630EST Marine Tstm Wind (EG35) Avon Point 1815EST **LEZ143** Reno Beach To The Islands Oh 1630EST Reno Beach to 0 Marine Tstm Wind (EG35) The Islands 1815EST LEZ144 The Islands To Vermilion Oh The Islands to 1630EST 0 Marine Tstm Wind (EG35) Vermilion 1815EST Strong thunderstorms moved northeast across Lake Erie and produced wind gusts in excess of 35 knots. **LEZ162** Le Detroit R Lt To Reno Beach Oh Byd 5Nm Offshore To Intl Border Maumee Bay to Marine Tstm Wind (EG35) Reno Beach Le Reno Beach To The Islands Oh Byd 5Nm Offshore To Intl Border Reno Beach to 1745EST Marine Tstm Wind (EG35) The Islands 1915EST Maumee Bay To Reno Beach Oh 1745EST 1915EST Maumee Bay to $\mathbf{0}$ Marine Tstm Wind (EG35) Reno Beach Reno Beach To The Islands Oh LEZ143 1745EST 1915EST Reno Beach to The Islands 0 Marine Tstm Wind (EG35) Strong thunderstorms moved east across the western basin of Lake Erie and produced wind gusts in excess of 35 knots. **LEZ163** Le Reno Beach To The Islands Oh Byd 5Nm Offshore To Intl Border Reno Beach to Marine Tstm Wind (EG35) 2030EST The Islands **LEZ164** Le The Islands To Vermilion Oh Byd 5Nm Offshore To Intl Border 1900EST The Islands to Marine Tstm Wind (EG35) 2030EST Vermilion Le Vermilion To Avon Pt Oh Byd 5Nm Offshore To Intl Border LEZ165 Vermilion to 1900EST 2030EST Marine Tstm Wind (EG35) Avon Point **LEZ143** Reno Beach To The Islands Oh Reno Beach to 1900EST 0 0 Marine Tstm Wind (EG35) The Islands 2030EST The Islands To Vermilion Oh 1900EST 2030EST Marine Tstm Wind (EG35) The Islands to 0 Vermilion **LEZ145** Vermilion To Avon Point Oh 1900EST 2030EST Vermilion to Marine Tstm Wind (EG35) Avon Point Strong thunderstorms moved east across Lake Erie and produced wind gusts in excess of 35 knots. **LEZ146** Avon Point To Willowick Oh Avon Point to Willowick 2000EST 2145EST Marine Tstm Wind (EG35) Le Avon Pt To Willowick Oh Byd 5Nm Offshore To Intl Border **LEZ166** Avon Point to Willowick 2000EST Marine Tstm Wind (EG35) 2145EST



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Time Local/ Path Length Persons Width Damage Character of Storm LAKE ERIE LEZ165 Le Vermilion To Avon Pt Oh Byd 5Nm Offshore To Intl Border Vermilion to Marine Tstm Wind (EG35) Avon Point Le Willowick To Geneva On The Lake Oh Byd 5Nm Offshore To Intl Border LEZ167 Willowick to 2000EST Marine Tstm Wind (EG35) Geneva-On-The-Lake 2145EST Vermilion To Avon Point Oh 2000EST Vermilion to 0 Marine Tstm Wind (EG35) **Avon Point** 2145EST **LEZ147** Willowick To Geneva On The Lake Oh Willowick to 2000EST Marine Tstm Wind (EG35) Geneva-On-The-Lake 2145EST Strong thunderstorms moved east across Lake Erie and produced wind gusts in excess of 35 knots. LEZ149 Conneaut Oh To Ripley Ny Ripley Ny 1130EST Marine Tstm Wind (EG35) **LEZ169** Le Conneaut Oh To Ripley Ny Byd 5Nm Offshore To Intl Border 1130EST Marine Tstm Wind (EG35) Conneaut to Ripley Ny 1300EST Strong thunderstorms moved southeast across Lake Erie and produced wind gusts in excess of 35 knots. LEZ146 Avon Point To Willowick Oh Avon Point to Willowick 1600EST Marine Tstm Wind (EG35) Le Avon Pt To Willowick Oh Byd 5Nm Offshore To Intl Border LEZ166 Avon Point to Willowick 27 1600EST Marine Tstm Wind (EG35) 1730EST Le Detroit R Lt To Reno Beach Oh Byd 5Nm Offshore To Intl Border 1600EST 1730EST Marine Tstm Wind (EG35) Maumee Bay to Reno Beach **LEZ163** Le Reno Beach To The Islands Oh Byd 5Nm Offshore To Intl Border Reno Beach to The Islands 1600EST 1730EST 27 Marine Tstm Wind (EG35) Le The Islands To Vermilion Oh Byd 5Nm Offshore To Intl Border LEZ164 The Islands to Vermilion 1600EST 1730EST Marine Tstm Wind (EG35) **LEZ165** Le Vermilion To Avon Pt Oh Byd 5Nm Offshore To Intl Border Vermilion to 1600EST Marine Tstm Wind (EG35) 27 Avon Point 1730EST Le Willowick To Geneva On The Lake Oh Byd 5Nm Offshore To Intl Border Willowick to Geneva-On-The-Lake 1600EST 1730EST Marine Tstm Wind (EG35) Maumee Bay To Reno Beach Oh Maumee Bay to Reno Beach 1600EST 1730EST 0 0 Marine Tstm Wind (EG35) Reno Beach To The Islands Oh LEZ143 Reno Beach to The Islands 1600EST 1730EST 27 0 0 Marine Tstm Wind (MG38) The Islands To Vermilion Oh LEZ144 1600EST 1730EST 0 0 Marine Tstm Wind (EG35) The Islands to 27 Vermilion Willowick To Geneva On The Lake Oh Willowick to 27 1600EST 0 Marine Tstm Wind (EG35) Geneva-On-The-Lake 1730EST





July 2003 Time Local/ Path Length Path Number of Estimated Persons Width Damage LAKE ERIE recorded at Camp Perry in Ottawa County. LEZ146 **Avon Point To Willowick Oh** Avon Point to Willowick 0 Marine Tstm Wind (EG35) 2000EST Le Avon Pt To Willowick Oh Byd 5Nm Offshore To Intl Border Avon Point to Willowick Marine Tstm Wind (EG35) Le Vermilion To Avon Pt Oh Byd 5Nm Offshore To Intl Border **LEZ165** Vermilion to Avon Point 1830EST 2000EST 27 Marine Tstm Wind (EG35) Le Willowick To Geneva On The Lake Oh Byd 5Nm Offshore To Intl Border LEZ167 Willowick to Geneva-On-The-Lake Marine Tstm Wind (EG35) **LEZ145** Vermilion To Avon Point Oh Vermilion to 1830EST 0 0 Marine Tstm Wind (EG35) 27 **Avon Point** 2000EST **LEZ147** Willowick To Geneva On The Lake Oh 1830EST 2000EST Willowick to Geneva-On-The-Lake Marine Tstm Wind (EG35) Strong thunderstorms moved southeast across Lake Erie and produced wind gusts in excess of 35 knots. LEZ149 Conneaut Oh To Ripley Ny Ripley Ny 1630EST 1800EST 0 0 Marine Tstm Wind (EG35) Geneva On The Lake Oh To Conneaut Oh 1630EST 1800EST Geneva-On-The-Lake to Marine Tstm Wind (EG35) Conneaut **LEZ169** Le Conneaut Oh To Ripley Ny Byd 5Nm Offshore To Intl Border 1630EST 1800EST Marine Tstm Wind (EG35) Conneaut to Ripley Ny Le Geneva On The Lake To Conneaut Oh Byd 5Nm Offshore To Intl Border LEZ168 Geneva-On-The-Lake to Marine Tstm Wind (EG35) Conneaut Le Willowick To Geneva On The Lake Oh Byd 5Nm Offshore To Intl Border LEZ167 Willowick to Geneva-On-The-Lake Marine Tstm Wind (EG35) 1630EST 1800EST 31 Willowick To Geneva On The Lake Oh Willowick to 1630EST Marine Tstm Wind (EG35) 31 Geneva-On-The-Lake 1800EST Strong thunderstorms moved north across Lake Erie and produced wind gusts in excess of 35 knots. OHIO, North **Wyandot County** Countywide 01 2030EST 100K Flash Flood Thunderstorms dumped locally heavy rains on Wyandot County. Rainfall totals of two to three inches were reported. Widespread lowland and street flooding occurred. Several roads were briefly closed because of flooding. **Lucas County** Sylvania to Toledo 35K Thunderstorm Wind (EG50) Thunderstorm winds downed many trees and several power poles.





July 2003 Time Local/ Path Length Path Width Number of Estimated Persons Damage OHIO, North **Hancock County** Countywide 04 0 0 40K Thunderstorm Wind (EG50) Thunderstorm winds downed many trees and at least two power poles across the county. Sandusky County 25K Thunderstorm Wind (EG50) Countywide 04 Thunderstorm winds downed several trees and large limbs across the county. **Wood County** 1305EST Pemberville 04 2KThunderstorm Wind (EG50) Thunderstorm winds downed a large tree. **Seneca County** Tiffin to Fostoria 04 1315EST 0 0 5K Thunderstorm Wind (EG50) Thunderstorm winds downed trees in Tiffin and Fostoria. **Wvandot County** Countywide 04 1315EST 0 5K Thunderstorm Wind (EG50) Thunderstorm winds downed two trees near Carey and a third in the southeastern corner of the county. **Erie County** Sandusky 04 1326EST 0 50K Thunderstorm Wind (EG50) Thunderstorm winds downed several trees. A home and building were damaged by fallen trees. A van was crushed by a tree. **Trumbull County Newton Falls** 1340EST Hail(0.75) Penny size hail was observed. **Trumbull County Newton Falls** 04 1340EST 15K Thunderstorm Wind (EG65) An estimated 75 mph thunderstorm wind gust was reported in Newton Falls. Several trees were downed. **Portage County** 04 1341EST 0 Hail(0.75) Ravenna 0 Penny size hail was observed. **Huron County** Norwalk 10K Thunderstorm Wind (EG50) 04 1400EST Thunderstorm winds downed several trees and many large limbs. **Marion County** 1345EST 0 15K Thunderstorm Wind (EG50) Marion Thunderstorm winds downed several trees. Seneca County Attica 04 1345EST 0 15K Thunderstorm Wind (EG50) Thunderstorm winds downed several trees and large limbs. **Crawford County** Galion Thunderstorm Wind (EG50) 0 4K Thunderstorm winds downed a few large tree limbs. **Crawford County** Galion 1400EST $\mathbf{0}$ 0 15K Thunderstorm Wind (EG50) Thunderstorm winds downed several trees.





July 2003 Time Local/ Path Length Path Number of Estimated Width Persons Damage OHIO, North **Huron County** Norwalk 04 1400EST 0 0 125K Thunderstorm Wind (EG50) Thunderstorm winds downed dozens of trees and large limbs in and around Norwalk. At least four homes were damaged by trees. **Lorain County** Thunderstorm Wind (EG50) 0 25K Oberlin to 04 Elyria Thunderstorm winds downed many trees and large limbs across the county. The Oberlin, Kipton and Elyria areas were especially hard hit. A barn was blown down in Eaton Township. A car was crushed by a tree in Elyria. A peak wind gust of 54 mph was measured at the Lorain County Airport near Elyria **Mahoning County** Austintown 04 1410EST 0 0 4K Thunderstorm Wind (EG50) Thunderstorm winds downed two trees. **Lorain County** Elyria 15K Thunderstorm Wind (EG50) 04 Thunderstorm winds downed several large tree limbs. A car was damaged by a limb on the west side of Elyria. **Cuyahoga County North Olmsted** 1425EST O 15K Thunderstorm Wind (EG50) A 58 mph thunderstorm wind gust was reported. A few trees were downed. **Lorain County** Elyria 04 1425EST 0 0 2KHail(0.88) Nickel size hail was observed. **Richland County** Thunderstorm Wind (EG50) 0 30K Countywide 0 Thunderstorm winds downed trees across the county. **Ashland County** Ashland Thunderstorm Wind (EG50) 04 1430EST 0 8K Thunderstorm winds downed one tree and several large limbs. **Ashland County** Countywide 1430EST 1450EST 15K Thunderstorm Wind (EG50) 04 Thunderstorm winds downed many trees and large limbs across the county **Geauga County Auburn Center** 15K Thunderstorm Wind (EG50) Thunderstorm winds downed several trees in Auburn Township. **Lorain County** 1430EST 0 **Amherst** 04 0 10K Thunderstorm Wind (EG50) Thunderstorm winds downed several trees. **Morrow County** Johnsville 1430EST 0 10K Thunderstorm Wind (EG50) Thunderstorm winds downed a few large trees. **Trumbull County** 1430EST Thunderstorm Wind (EG50) Niles 0 0 15K Thunderstorm winds downed several trees. **Trumbull County** Cortland 1437EST 0 0 15K Thunderstorm Wind (EG50)

Thunderstorm winds downed several trees.





Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Numb Perse Killed		Estima Dama Property		Character of Storm	July 2003
OHIO, North										
Lorain County Eaton Estates	04 Thund	1440EST erstorm winds bl	ew down a ba	rn in Eaton T	0 Township.	0	50K		Thunderstorm W	ind (EG50)
Medina County Weymouth	04 Thund	1445EST 1500EST erstorm winds to	ppled around	two dozen tro	0 ees near Wey	0 ymouth.	25K		Thunderstorm W	find (EG50)
Geauga County Parkman	04 Thund	1452EST erstorm winds da	nmaged a barn	and downed	0 one large tre	0 ee.	30K		Thunderstorm W	find (EG50)
Wayne County Apple Creek	04 Thund	1505EST erstorm winds to	ppled two ver	y large trees.	0	0	5K		Thunderstorm W	find (EG50)
Holmes County Killbuck	04 Thund	1515EST erstorm winds do	owned several	trees.	0	0	8K		Thunderstorm W	find (EG50)
Summit County Mogadore	04 Thund	1515EST erstorm winds do	owned a large	tree which la	0 anded on a ho	0 ouse and o	25K caused signif	icant dam	Thunderstorm Wage.	find (EG50)
Portage County Countywide		1519EST 1544EST erstorm winds do				0, five tree	100K es in Hiram	and scatte	Thunderstorm W	
Knox County Danville	04 Thund	1523EST erstorm winds do	owned many t	rees.	0	0	25K		Thunderstorm W	ind (EG50)
Portage County Hiram	04 Nickel	1526EST size hail was ob	served.		0	0	2K		Hail(0.88)	
Stark County Canton	04 Thund	1530EST erstorm winds do	owned two lar	ge trees three	0 e miles south	0 west of C	5K anton.		Thunderstorm W	find (EG50)
Stark County Waynesburg	04 A 60 n	1532EST nph thunderstorn	n wind gust w	as measured.	0 A few trees	0 and large	7K e limbs were	downed.	Thunderstorm W	find (MG52)
Mahoning County Lake Milton	04 Thund	1535EST erstorm winds do	owned several	trees.	0	0	10K		Thunderstorm W	(ind (EG50)
Cuyahoga County Westlake to Bay Vlg	06 Thund	1205EST 1210EST erstorm winds do	owned three tr	ees in Westla	0 ake and seve	0 ral more i	25K n Bay Villag	e.	Thunderstorm W	find (EG50)
Cuyahoga County Solon	06 Thund	1255EST erstorm winds to	ppled one larg	ge tree.	0	0	2K		Thunderstorm W	find (EG50)
Summit County Twinsburg	06 Thund	1300EST 1310EST erstorm winds do	owned a few to	rees and large	0 e limbs in an	0 d around	20K Twinsburg.		Thunderstorm W	find (EG50)





Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Numb Pers Killed	oer of sons Injured	Estimated Damage Property Crops	July 2003 Character of Storm
OHIO, North			, , , , , , , , , , , , , , , , , , , ,	\				
Portage County Ravenna	06 Thund	1315EST erstorm winds do	owned a few tr	rees	0	0	10K	Thunderstorm Wind (EG50)
Geauga County Auburn Center	06	1325EST erstorm winds do			0 urn Townsh	0	20K	Thunderstorm Wind (EG50)
Trumbull County Bazetta to Kinsman	06	1335EST 1400EST erstorm winds do			0	0	15K	Thunderstorm Wind (EG50)
Trumbull County Lordstown	06	1340EST erstorm winds do			0	0	15K	Thunderstorm Wind (EG50)
Wood County Perrysburg	06 Thund	1920EST erstorm winds m	easured at 42 i	mph downed	0 l one large ti	0 ree limb.	1K	Thunderstorm Wind (MG37)
Wood County Perrysburg	07 Thund	1255EST erstorm winds do	owned many la	arge tree limb	0 os across the	0 e county.	10K	Thunderstorm Wind (EG50)
Hancock County Arlington to Findlay	07 Thund	1305EST 1320EST erstorm winds do	owned many tr	rees in Arling	0 gton and a fe	0 ew trees ar	25K nd large limbs in Fin	Thunderstorm Wind (EG50) adday.
Hancock County Findlay Arpt	07 A 58 n	1313EST nph thunderstorm	n wind gust wa	as measured :	0 at the Findla	0 ny Airport		Thunderstorm Wind (MG50)
Ottawa County Countywide	07 Thund	1315EST erstorm winds do	owned trees ac	ross the cour	0 nty.	0	25K	Thunderstorm Wind (EG50)
Erie County Countywide	07 Thund	1320EST erstorm winds do	owned a few tr	ees and large	0 e limbs acro	0 ss the cou	20K nty.	Thunderstorm Wind (EG50)
Lucas County Waterville to Toledo	07 Thund	1320EST 1330EST erstorm winds do	owned trees in	Waterville a	0 and Toledo.	0 A home v	30K was damaged by a tro	Thunderstorm Wind (EG50) ee on the east side of Toledo.
Sandusky County Countywide	07 Thund	1320EST erstorm winds do	owned trees ac	ross the cour	0 nty.	0	25K	Thunderstorm Wind (EG50)
Seneca County Countywide	07 A 55 n	1335EST 1345EST nph thunderstorm	n wind gust wa	as measured.	0 A few tree	0 s and large	15K e limbs were downed	Thunderstorm Wind (MG48) d across the county.
Wyandot County Countywide		1340EST erstorm winds d dot County.	owned a few	trees in the	0 northeasterr	0 n portion	20K of the county with s	Thunderstorm Wind (EG50) scattered large limbs down elsewhere in





	Time		Path Path		Numb		Estimated	July 200	
Location	Date	Local/ Standard	Length (Miles)	Width (Yards)	Pers Killed	ons Injured	Damage Property Crops	Character of Storm	
OHIO, North									
Marion County Marion	07 Thund	1355EST derstorm winds de	owned a few t	rees.	0	0	10K	Thunderstorm Wind (EG50)	
Cuyahoga County Cle Hopkins Intl Arp	07 A 61 1	1400EST mph thunderstorn	n wind gust w	as measured	0 at Cleveland	0 l Hopkins	International Airpo	Thunderstorm Wind (MG53) ort.	
Cuyahoga County Countywide	07 Thund	1400EST 1430EST derstorm winds de	owned trees ac	cross the cour	0 nty.	0	50K	Thunderstorm Wind (EG50)	
Lorain County Lorain	07 Thund	1400EST derstorm winds do	owned a few t	rees.	0	0	10K	Thunderstorm Wind (EG50)	
Crawford County Countywide	07 Thund	1405EST 1430EST derstorm winds de	owned trees ar	nd large limb	0 s across the	0 county. A	40K A house in Bucyrus	Thunderstorm Wind (EG50) was damaged by a fallen tree	
Erie County Countywide	07 Thund	1410EST derstorm winds de	owned a few t	rees across th	0 ne county.	0	15K	Thunderstorm Wind (EG50)	
Portage County Countywide	07 Thund	1410EST 1420EST derstorm winds de	owned trees ar	nd large limb	0 s across the	0 county. A	50K A home in Ravenna	Thunderstorm Wind (EG50) was damaged by a fallen tree.	
Portage County Ravenna	07 Golf b	1410EST pall size hail was	observed. Sev	veral cars we	0 re damaged.	0	50K	Hail(1.75)	
Huron County Countywide	07 Thund	1415EST 1430EST derstorm winds de	owned many t	rees across th	0 ne county. T	0 The Bellvu	50K ne and Norwalk area	Thunderstorm Wind (EG50) as were the hardest hit.	
Summit County Countywide	07 Thund	1415EST derstorm winds do	owned a few t	rees across th	0 ne northern h	0 nalf of the	15K county.	Thunderstorm Wind (EG50)	
Summit County Barberton	07 Thunc	1420EST derstorm winds de	owned several	trees.	0	0	15K	Thunderstorm Wind (EG50)	
Morrow County Countywide	07 Thund	1430EST derstorm winds de	owned a few t	rees across th	0 ne county.	0	15K	Thunderstorm Wind (EG50)	
Lorain County La Grange	07 Penny	1432EST size hail was ob	served.		0	0		Hail(0.75)	
Ashland County Countywide	07 Thunc	1440EST derstorm winds de	owned several	trees across	0 the northern	0 half of th	20K are county.	Thunderstorm Wind (EG50)	





July 2003 Time Local/ Path Length Path Number of Estimated Width Persons Damage OHIO, North **Richland County** Bellville to Mansfield 30K 07 0 0 Thunderstorm Wind (EG50) Thunderstorm winds downed trees in Bellville and Mansfield. A mobile home was heavily damaged by a tree in Mansfield. **Medina County** Countywide 50K Thunderstorm Wind (EG50) Thunderstorm winds downed trees and large limbs across the county. A house in Lafayette Township was damaged by a tree and a building in Medina also sustained minor damage. **Medina County** 07 1449EST Medina 0 Hail(0.75) Penny size hail was observed. **Knox County** Mt Vernon 07 1500EST 15K Thunderstorm Wind (EG50) Thunderstorm winds downed several trees and large limbs. **Portage County** Streetsboro 1509EST 0 15K Hail(1.75) Golf ball size hail was observed. Several cars were damaged. **Holmes County** Millersburg 07 1510EST 5K Thunderstorm Wind (EG50) Thunderstorm winds downed two trees south of Millersburg. **Wayne County** 0 Countywide 07 1510EST 0 50K Thunderstorm Wind (EG50) Thunderstorm winds downed trees and large limbs across the county. A small mobile home near Wooster was crushed by fallen **Summit County** 1520EST 0 0 25K Thunderstorm Wind (EG52) Countywide Thunderstorm wind gusts estimated at 50 to 60 mph downed a few trees and large limbs across the county. **Portage County** Randolph 10 Tornado (F0) A small tornado briefly touched down in a field along Laubert Road to the south of Randolph. The tornado was on the ground only a few dozen feet and caused no damage. **Mahoning County** Canfield 07 1525EST 2KHail(0.88) Nickel size hail was observed. **Stark County** Waynesburg 07 1527EST 0 0 Thunderstorm Wind (MG52) A 60 mph thunderstorm wind gust was measured. **Summit County** 1528EST 2K Hail(0.88) Akron Nickel size hail was observed. **Summit County** 07 Countywide 1528EST Thunderstorm Wind (EG50) Thunderstorm winds downed trees and large limbs in Macedonia, Twinsburg and Akron. **Portage County** Thunderstorm Wind (EG50) Countywide Thunderstorm winds downed many trees and large limbs across southern Portage County.





Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Numb Pers Killed	oer of sons Injured	Estimated Damage Property Crop	July 2003 s Character of Storm
OHIO, North								
Mahoning County Austintown	07 Thund	1540EST lerstorm winds de	owned several	trees.	0	0	15K	Thunderstorm Wind (EG50)
Mahoning County Ellsworth to Canfield	07 Thund	1540EST 1600EST lerstorm winds de	owned several	trees and lar	0 ge limbs in	0 the Ellswo	15K orth and Canfield a	Thunderstorm Wind (EG50)
Portage County								
Countywide	07	1600EST 1830EST			0	0	200K	Flash Flood
	and lo	lerstorms dumped wland flooding of and roads in the	occurred in th	ne county. T	he flooding	was mos	t severe in Raven	oon and evening hours. Widespread street na, Rootstown and Charlestown. Several aarlestown was severely damaged by flood
Lorain County Amherst to Lorain	07 Thund	2010EST	owned trees in	n Amherst and	0 1 Lorain - A	0 home was	30K	Thunderstorm Wind (EG50)
	Titalic	icistoriii wiiids d	owned trees in	i i iiiiicist uik	a Lorum. 11	nome wa	s damaged by a ra	nen tree in Bortain.
Cuyahoga County North Olmsted	07	2035EST I size hail was ob	eervad		0	0	2K	Hail(0.88)
Cuyahoga County Strongsville	07	2055EST 2059EST			0	0	4K	Hail(0.88)
	Nicke	l size hail was ob	served.					
Cuyahoga County Strongsville	07 Penny	2056EST to quarter size h	ail was observ	ved.	0	0	2K	Hail(1.00)
Medina County Brunswick	07 Nicke	2106EST I size hail was ob	served.		0	0	2K	Hail(0.88)
Medina County Brunswick	07 Penny	2109EST size hail was ob	served.		0	0		Hail(0.75)
Summit County								
Countywide	07	2110EST 2305EST			0	0	50K	Thunderstorm Wind (EG50)
				l across Sum	mit County	during the	e late evening hou	rs of the 7th. Many trees and large limbs
Medina County Countywide	07 Thund	2120EST derstorm winds de	owned a few t	rees in the so	0 utheastern c	0 corner of the	10K ne county.	Thunderstorm Wind (EG50)
Stark County								
Countywide	07 Thund	2210EST lerstorm winds de	owned several	trees across	0 the northern	0 half of th	25K e county.	Thunderstorm Wind (EG50)
Medina County								
Medina	07	2300EST	1.0		0	0	10K	Thunderstorm Wind (EG50)

Thunderstorm winds downed a few trees in Medina.





Location	Time Local/ Date Standard	Path Path Length Width (Miles) (Yards)	Numbe Perse Killed		Estimated Damage Property Crops	Character of Storm	July 2003
OHIO, North							
Summit County Hudson	08 0010EST Penny size hail was obs	served.	0	0		Hail(0.75)	
Portage County Ravenna	08 0050EST Penny size hail was obs	served.	0	0		Hail(0.75)	
Hancock County Mt Cory to Rawson	08 0230EST Thunderstorm winds do	owned several trees in sout	0 hwestern Ha	0 ncock Cou	50K unty near Bluffton, l	Thunderstorm Win	d (EG50)
Sandusky County Countywide	scattered power outages	erstorms moved across Sas. A 60 mph gust was me were damaged by fallen tr	asured at Wo	oodville at			d damage and
Lucas County Countywide	08 0245EST Thunderstorm winds d outages were reported.	owned trees and large lin	0 abs across th	0 se county.	250K Several roads wer	Thunderstorm Win e blocked by trees and s	
Seneca County Countywide	at 3:51 a.m. Over 100 county and a barn was	rstorms moved across Sen) trees and at least ten po leveled on County Road 3' ute 4 near Attica. Many v	wer poles we 9. Several b	ere downe uildings w	ed in the county. So were also damaged a	several homes were dama t the county fairgrounds a	sured in Tiffin ged across the
Wood County Rossford to Walbridge		owned a few trees in Rossf			15K	Thunderstorm Win	, ,
Countywide	08 0245EST 0300EST A line of severe thunde buildings sustained dan	erstorms moved across Wy	0 vandot Count	0 ty and dov	150K wned many trees, la	Thunderstorm Win	
Crawford County Countywide		rstorms moved across Cra dozens of downed trees a					the county was
Marion County Countywide	08 0300EST Thunderstorm winds do	owned many trees and limb	0 os across the	0 county.	50K	Thunderstorm Win	d (EG50)
Richland County Ontario	08 0312EST Penny size hail was obs	served.	0	0		Hail(0.75)	





July 2003 Time Local Path Length Path Number of Estimated Persons Width Damage OHIO, North **Huron County** Countywide 08 0 300K Thunderstorm Wind (MG56) A line of severe thunderstorms moved east across Huron County early in the morning and caused widespread damage and scattered power outages. A 65 mph wind gust was measured near Norwalk at 4:30 a.m. Dozens of trees were downed across the county and at least three power poles were toppled near Bellvue. A home in Norwalk was heavily damaged by a fallen tree. A few homes and vehicles were also damaged in Bellevue. **Morrow County** Countywide 08 0315EST 50K Thunderstorm Wind (EG50) Thunderstorm winds downed trees and large limbs across the county. **Ottawa County** Countywide 08 0315EST 0 0 50K Thunderstorm Wind (EG50) Thunderstorm winds downed many trees and large limbs across the county **Richland County** 0315EST 10K Thunderstorm Wind (EG50) Shelby Thunderstorm winds downed a few trees. **Richland County** Shiloh 08 0322EST 0 0 Hail(0.88) Nickel size hail was observed. **Erie County** Countywide 400K Thunderstorm Wind (MG56) 08 0400EST A line of severe thunderstorms moved across Erie County during the early morning hours causing widespread damage and scattered power outages. The Milan, Sandusky and Berlin Heights areas were especially hard hit. A 65 mph thunderstorm gust was measured at Huron at 4:47 a.m. Other measured gusts included 57 mph at Sandusky and 56 mph at Berlin Heights. Dozens of trees were downed and many homes damaged. Three vehicles were destroyed by fallen trees and several others damaged. **Ashland County** Countywide 08 0345EST 50K Thunderstorm Wind (EG50) Thunderstorm winds downed several trees across northern Ashland County. **Knox County** Mt Vernon 08 0 50K Thunderstorm Wind (EG50) Thunderstorm winds downed many trees and large limbs in Mount Vernon. A car was crushed by a fallen tree. **Lorain County** Countywide 08 250K Thunderstorm Wind (MG56) A line of severe thunderstorms moved across Lorain County before daybreak causing widespread damage and power outages. The Elyria and Lorain areas were very hard hit with dozens of trees downed in both cities. A 65 mph thunderstorm gust was measured at Elyria at 5:00 a.m. Many trees were also downed elsewhere in the county. A home was heavily damaged in Avon with several other buildings in the county sustaining minor damage. Dozens of cars were damaged and as many as 26,000 customers lost power during the storm. **Medina County** Countywide 08 50K Thunderstorm Wind (EG50) 0345EST 0415EST Thunderstorm winds downed many trees and large limbs. **Medina County** Medina 15K Thunderstorm Wind (EG50) Thunderstorm winds downed five trees in Medina Township.





July 2003 Time Local Path Length Path Number of Estimated Width Persons Damage OHIO, North **Wayne County** Countywide 08 0410EST 0 0 50K Thunderstorm Wind (EG50) Thunderstorm winds downed trees and large limbs across the county. **Holmes County** Countywide 08 0415EST 50K Thunderstorm Wind (EG50) Thunderstorm winds downed trees and large limbs across the county. **Cuyahoga County** Cle Hopkins Intl Arp 08 Thunderstorm Wind (MG50) A 58 mph thunderstorm wind gust was measured at Cleveland Hopkins International Airport. **Stark County** Hartville 08 250K Thunderstorm Wind (MG55) A line of severe thunderstorms moved across Stark County just before daybreak and caused widespread damage and scattered power outages. A 63 mph thunderstorm wind gust was measured near Hartville at 531 a.m. Dozens of trees were downed across the county and homes were damaged in Alliance and near East Canton. Several vehicles were also damaged or destroyed in the county. **Summit County** Countywide 08 0430EST 0 250K Thunderstorm Wind (EG50) A line of severe thunderstorms moved across Summit County around daybreak and caused scattered power outages. Many trees were downed across the county and a house was heavily damaged in Cuyahoga Falls. Two other homes were damaged in Tallmadge and a car was crushed by a tree in Fairlawn. **Portage County** 08 0445EST 0 Countywide 0 75K Thunderstorm Wind (EG50) Thunderstorm winds downed several trees and large limbs across the county. Homes were damaged by fallen trees in Ravenna and Brimfield. **Cuyahoga County** 0510EST 300K Countywide 08 Thunderstorm Wind (MG50) A line of severe thunderstorms moved across Cuyahoga County just before daybreak causing widespread damage and scattered power outages. The southern half of the county was hardest hit with dozens of trees downed in both Brookpark and Berea. Many other trees were downed elsewhere in the county. Homes were damaged in Westlake, Brookpark, Berea and Parma Heights. Several vehicles were also damaged. **Mahoning County** Canfield to Youngstown 08 100K Thunderstorm Wind (EG50) A line of severe thunderstorms moved across Mahoning County around daybreak and caused scattered power outages. Many trees were downed in Canfield and Youngstown. **Trumbull County** Leavittsburg to 08 0510EST 50K Thunderstorm Wind (EG50) Warren A line of severe thunderstorms moved across Trumbull County around daybreak and downed many trees in Leavittsburg and Warren. **Geauga County** Newbury 08 25K Thunderstorm Wind (EG50) Thunderstorm winds downed several trees in Newbury Township. **Wood County** 15K Thunderstorm Wind (EG50) **Tontogany**

Thunderstorm winds downed trees and limbs to the northwest of Tontogany near the intersection of State Routes 235 and 65.





Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Numb Pers Killed		Estim Dan Property		Character of Storm	July 2003
OHIO, North										
Lucas County Toledo	08 Thund	1430EST erstorm winds de	owned six tree	s west of Tol	0 ledo.	0	15K		Thunderstorm W	ind (EG50)
Wood County Bowling Green	gust wo very ha were e and a Hundre	as measured at the ard hit. The termither damaged or press box on the	he Bowling Gr minal building r destroyed. F he campus we	reen Airport lost a large our buildings re also toppl	at approxima section of ros s at the Bow led. Many	ntely 3:55 oof with the ling Green other home	p.m. The anree nearby n State University and built	irport, loca hangers he ersity were ldings, inc	Thunderstorm We and power outages. Intended on the northeast seavily damaged. A to be damaged by the strochuding a city garage. Dozens of vehicles seavened to be a seavened to	A 101 mph wind ide of town, was stal of 17 aircrafting winds. Signs were damaged.
Wood County Countywide	signific A few	cant damage occ	urred in the ce	entral portion d Rapids and	of the count a garage wa	ty, but Br as leveled	adner, Tont in Tontogar	ogany and ny by wind	Thunderstorm W nage and power outa Grand Rapids were a s estimated to be in e	nges. The most lso very hard hit.
Lucas County Maumee	08 Thund	1455EST erstorm winds de	owned several	trees and lar	0 ge limbs. Ty	0 wo homes	75K were heavi	ly damage	Thunderstorm W d by fallen trees.	ind (EG50)
Wyandot County Carey	08 Thund	1500EST erstorm winds de	owned several	trees.	0	0	15K		Thunderstorm W	ind (EG50)
Hancock County Countywide	08 Thund	1520EST erstorm winds de	owned several	trees across	0 the county.	0	15K		Thunderstorm W	ind (EG50)
Seneca County Countywide	08 Thund	1525EST erstorm winds de	owned many ti	rees and large	0 e limbs acros	0 ss the cou	35K nty.		Thunderstorm W	ind (EG50)
Crawford County Bucyrus	08 Thund	1530EST erstorm winds do	owned many la	arge tree liml	0 bs.	0	15K		Thunderstorm W	ind (EG50)
Hancock County Countywide	lowlan	-	street flooding	occurred acr	ross mainly	the south			Flash Flood noon and early eveni Several roads had t	-
Wyandot County Countywide	08 Thund	1540EST 2100EST erstorms dumpe	ed two to fou	r inches of	0 rain on Wy	0 yandot C	100K ounty durin	500K g the late	Flash Flood afternoon and early	evening hours.





July 2003 Time Local/ Path Length Path Number of Estimated Width Persons Damage OHIO, North Widespread street and lowland flooding occurred with many streams and creeks leaving their banks. Many roads had to be closed due to flood waters up to four feet deep. **Seneca County** Countywide 100K 500K Flash Flood 08 Thunderstorms dumped two to four inches of rain on Seneca County during the late afternoon and early evening hours. Widespread street and lowland flooding occurred with many streams and creeks leaving their banks. Many roads had to be closed due to flood waters up to three feet deep. **Crawford County Bucyrus** 08 1600EST 250K 600K Flash Flood 2030EST Thunderstorms dumped two to four inches of rain on Bucyrus during the late afternoon and early evening hours causing many streams and creeks to leave their banks. Two inches of rain was measured in 25 minutes during the peak of the storm. Widespread street and lowland flooding occurred, mainly on the east side of the city. Several streets had to be closed due to flooding. Flood waters up to three feet deep were reported and at least a couple vehicles became stranded in the high water. **Huron County** Countywide 250K Flash Flood Thunderstorms dumped very heavy rains on Huron County during the late afternoon and early evening hours. Over two inches of rain fell in Willard during a 20 minute period. For the afternoon, 2.9 inches of rain fell at Willard. Widespread street and lowland flooding occurred in both Willard and Norwalk. Several roads were washed out in Willard and Ripley Township. New State Road was washed out just to the south of U.S. 224. Water on some roads in Willard was reported to be as much as five feet deep. **Huron County** Willard ns. 1615EST 0 0 50K Thunderstorm Wind (EG50) Thunderstorm winds downed several trees and large limbs. A home to the south of Willard was damaged by a fallen tree. **Richland County** Thunderstorm Wind (EG50) 08 0 0 150K Countywide A line of severe thunderstorms moved across Richland County and downed dozens of trees and large limbs. The Mansfield and Ontario areas were especially hard hit. A mobile home was damaged in Ontario. Scattered power outages were reported. **Ashland County** Countywide 08 125K Thunderstorm Wind (EG50) 1655EST A line of severe thunderstorms moved across Ashland County and downed dozens of trees. Over 40 trees and large limbs were downed in Ashland alone. Many trees were also toppled in the southern portion of the county near Mohican State Park. A shower house at the park was heavily damaged as were three cars parked nearby. **Ashland County** Polk 08 1631EST 2KHail(0.88) Nickel size hail was observed. **Lorain County** Countywide 08 1645EST 50K Thunderstorm Wind (EG50) Thunderstorm winds downed trees and large limbs in Rochester, Huntington and Elyria. A covered picnic shelter was blown down

in Elyria.



Waco

08

National Weather Service Storm Data and Unusual Weather Phenomena



July 2003 Time Local Path Length Path Number of Estimated Width Persons Damage OHIO, North **Morrow County** Countywide 08 1645EST 0 0 50K Thunderstorm Wind (EG50) Thunderstorm winds downed several trees and large limbs. A motor home was crushed by a fallen tree. **Summit County** Thunderstorm Wind (EG50) **Boston Hgts** 08 1645EST 25K Thunderstorm winds downed numerous trees. **Holmes County** Countywide 08 1650EST 100K Thunderstorm Wind (EG50) 1720EST A line of severe thunderstorms moved east across Holmes County and caused widespread damage and scattered power outages. The Winesburg, Holmesville and Killbuck areas were especially hard hit. Dozens of trees were downed across the county. Homes were damaged in both Holmesville and Winesburg. **Medina County** 25K Thunderstorm Wind (EG50) Granger 08 Thunderstorm winds downed many trees. **Portage County** 1655EST Hail(0.88) Streetsboro 2KNickel size hail was observed. **Summit County** 1659EST Fairlawn 08 0 Thunderstorm Wind (EG50) 2K Thunderstorm winds downed a large tree. **Ashland County** Countywide 08 100K 250K Flash Flood Thunderstorms dumped two to three inches of rain on Ashland County in a short period of time. 1.75 inches of rain was measured at Polk in 75 minutes during the peak of the storm. Widespread lowland and street flooding occurred with many streams and creeks leaving their banks. Several vehicles became stranded in flooded underpasses in Ashland. Well over a dozen roads had to be closed in the county due to flood waters up to three feet deep. **Wayne County** 08 1705EST 15K Thunderstorm Wind (EG50) Countywide Thunderstorm winds downed several trees and large limbs. **Portage County** Ravenna 08 1724EST 0 Hail(0.75) Penny size hail was observed. **Richland County** 1745EST 1900EST Mansfield 500K 300K Flash Flood 08 Thunderstorms dumped two to three inches of rain on Mansfield during the evening hours. Widespread street and lowland flooding occurred as several streams and creeks left their banks. A library had to be evacuated due to flooding in a ground level lobby and parking garage. Several streets in the downtown area flooded stranding many vehicles. Several people had to be rescued from their vehicles. Water up to eight feet deep was reported in an underpass just east of downtown. **Stark County**

A line of severe thunderstorms moved across Stark County and downed dozens of trees and large limbs. A 70 mph thunderstorm wind gust was estimated in Waco at 6:31 p.m.

150K

Thunderstorm Wind (EG61)





July 2003 Time Local Path Length Path Number of Estimated Damage Width Persons OHIO, North **Mahoning County** Countywide 08 1805EST 0 0 25K Thunderstorm Wind (EG50) Thunderstorm winds downed a few trees and several large limbs. **Holmes County** Killbuck 08 1900EST 100K 250K Flash Flood 2000EST Thunderstorms dumped heavy rains on Holmes County during the evening hours causing localized flooding near Killbuck. A mudslide occurred on a hill north of town resulting in the destruction of two mobile homes. There were no injuries. **Huron County Collins** 10 1030EST 0.1 25 30K Tornado (F0) A weak tornado touched down about one mile southeast of Collins in Townsend Township. The tornado was only on the ground for a few hundred yards before lifting. This F0 tornado knocked down a few trees and caused some crop damage. No buildings were damaged. A moving recreational vehicle was pushed off the road but little damage and no injuries occurred. **Lorain County** Amherst to Avon Lake 10 1130EST **Funnel Cloud** A funnel cloud was observed for several minutes over northern Lorain County. The funnel was first spotted along Cooper Foster Park Road in Amherst. The funnel then traveled northeast over the city of Lorain and finally dissipated near Avon Lake. The funnel never came in contact with the ground and caused no damage. **Lorain County** Lorain 10 1140EST 0 2K Thunderstorm Wind (EG50) Thunderstorm winds downed a tree. **Lorain County Sheffield Lake** 1145EST 2K Thunderstorm Wind (EG50) Thunderstorm winds downed a tree. **Ashtabula County** 1600EST Wavne 10 Funnel Cloud A funnel cloud was observed by law enforcement officials along State Route 11 in Wayne Township. No touchdown or damage occurred. **Wood County** Custar 20 1645EST 0 0 10K Thunderstorm Wind (EG50) Thunderstorm winds downed several large tree limbs. **Hancock County** West Independence 20 1705EST 2KHail(1.00) Quarter size hail was observed near West Independence. **Wyandot County** Harpster 0810EST 0 0 2K Thunderstorm Wind (EG50) 21 Thunderstorm winds downed two large tree limbs. **Marion County** La Rue 0815EST 0 0 5K Thunderstorm Wind (EG50) Thunderstorm winds downed two large trees. **Hancock County Findlay** 0818EST 0 5K Thunderstorm Wind (EG50) Thunderstorm winds downed a few large tree limbs. **Marion County** Marion 21 0824EST 12K Thunderstorm Wind (EG50)

Thunderstorm winds downed a few trees and several large limbs west of Marion.





July 2003 Time Local/ Path Length Path Width Number of Estimated Damage Persons OHIO, North **Morrow County** Mt Gilead to Chesterville 21 0 25K Thunderstorm Wind (EG50) Thunderstorm winds downed several trees near Mount Gilead and Chesterville. **Knox County** 0830EST Centerburg 21 Thunderstorm Wind (EG52) Thunderstorm wind gusts were estimated at 60 mph. **Crawford County** Galion 21 0835EST 0 0 6**K** Thunderstorm Wind (EG50) Thunderstorm winds downed several large limbs. **Richland County** 0900EST O Thunderstorm Wind (EG50) Mansfield 21 2K Thunderstorm winds downed two large trees limbs in Washington Township to the south of Mansfield. **Ashland County** Ashland 21 0905EST 10K Thunderstorm Wind (EG50) Thunderstorm winds downed trees and limbs five miles north of Ashland. **Holmes County** Killbuck 21 0915EST 0 0 5K Thunderstorm Wind (EG50) Thunderstorm winds downed several large tree limbs. **Portage County** Atwater 1205EST Thunderstorm Wind (MG54) A 62 mph thunderstorm wind gust was measured in Atwater. **Stark County** Thunderstorm Wind (EG50) 25K **Crystal Spgs** 21 25K Thunderstorm winds downed several trees and large limbs. A building had several windows blown out and a field nearby was flattened **Mahoning County** Lake Milton 21 1225EST 40K Thunderstorm Wind (EG50) Thunderstorm winds downed many trees just east of Lake Milton. **Trumbull County** Warren 1230EST 25K Thunderstorm Wind (EG50) Thunderstorm winds downed several large trees. **Mahoning County** Youngstown 21 8 75 0 0 1M Tornado (F1) A tornado touched down just southwest of the Mahoning River between Gibson and Poland Avenues on the northeast side of Youngstown. The tornado then skipped northeast for approximately eight miles before dissipating on the eastern edge of the city just south of the Trumbull County border. The damage path was 50 to 100 yards in width and was intermittent in nature. Ten businesses and around 80 homes were damaged by the tornado. One business was destroyed, and of the 80 homes, 60 had major damage. Two railroad cars were overturned and hundreds of trees were toppled along the damage path. **Wayne County** Wooster 5K Thunderstorm Wind (EG50) Thunderstorm winds downed two trees five miles north of Wooster. **Portage County** Wayland 21 1730EST 0 0 5K Thunderstorm Wind (EG50)

Thunderstorm winds downed two trees





July 2003 Time Local/ Path Length Path Number of Estimated Width Persons Damage OHIO, North **Cuyahoga County** Cleveland 21 1800EST 0 20K Thunderstorm Wind (EG50) Thunderstorm winds downed several trees. **Summit County** Countywide 21 1803EST 15K Thunderstorm Wind (EG50) Thunderstorm winds downed many large tree limbs in southern Summit County. **Stark County** Hartville 21 0 **Funnel Cloud** A funnel cloud was observed just east of Hartville. The funnel never came in contact with the ground and caused no damage. **Trumbull County Howland Corners** 21 1820EST 50K Thunderstorm Wind (EG50) Thunderstorm winds toppled several trees in Howland Township. At least two homes were damaged by fallen trees. **Stark County** Marlboro 21 1825EST **Funnel Cloud** A funnel cloud was observed two miles north of Marlboro. The funnel never came in contact with the ground and caused no **Trumbull County** Churchill 21 1833EST 500K Thunderstorm Wind (EG50) Thunderstorm downburst winds caused considerable damage at a mobile park along State Route 193 in Liberty Township just to the north of the Mahoning County line. Three mobile homes were destroyed and 17 others damaged. A 40 year man sustained a broken arm when his mobile home was overturned. Dozens of trees were downed in the area. Many vehicles were also damaged. **Ottawa County** Oak Harbor 1835EST Hail(0.75) Penny size hail was observed north of Oak Harbor. **Trumbull County** Girard 1845EST 15K Thunderstorm Wind (EG50) Thunderstorm winds downed several trees north of Girard near Lake Girard. **Trumbull County** Hubbard 1845EST Thunderstorm Wind (EG50) 15K Thunderstorm winds downed several trees. **Mahoning County** 2045EST 25K Thunderstorm Wind (EG50) Countywide 21 Thunderstorm winds downed several trees and large limbs across the county. **Marion County** Marion 21 2055EST Thunderstorm Wind (EG50) Thunderstorm winds downed one tree and several large limbs four miles west of Marion. **Trumbull County** Countywide 21 1200EST 1515EST 12M Flash Flood Thunderstorms dumped two to four inches of rain on portions of Trumbull County during the afternoon hours. The most severe flooding occurred in Warren, Howland, Braceville and Brookfield Townships with many evacuations reported. 2.71 inches of rain fell in Southington by 2 p.m with 4.61 inches of rain in Brookfield by 3 p.m. A 10 year boy drowned on the northeast side of Warren around 2 p.m. when he was sucked into a culvert and became trapped. Many roads were washed out in Howland Township.

Sev M10OU





Time Path Path Number of Estimated Local/ Length Width Persons Damage

Location Date Standard (Miles) (Yards) Killed Injured Property Crops Character of Storm

OHIO, North

Ashtabula County South Portion

21 1300EST 0 0 500K Flash Flood

Heavy thunderstorm rains fell on Ashtabula County. Spotters in Colebrook Township measured 4.50 inches of rain during the day with over 3.5 inches measured in Orwell Township. Widespread lowland and street flooding was reported in southern Ashtabula County as several small streams and creeks left their banks. A few homes and buildings were damaged by flood waters up to two feet deep. Several roads had to be closed.

Mahoning County Countywide

21 1845EST 0 0 750K Flash Flood 2200EST

Thunderstorms dumped very heavy rains on the northern and eastern portions of Mahoning County. Rainfall rates during the evening hours approached two inches per hour at times. Rainfall totals for the day ranged from around five inches in the northern portion of the county to around two inches in the south. Urban and lowland flooding occurred countywide but the northeastern corner of the county sustained the greatest damage after several small streams and creeks left their banks. Many homes and streets in that corner of the county were affected by flood waters up to four feet deep. Portions of Youngstown were also impacted by this flooding and several buildings on the Youngstown State University campus were damaged. A handful of motorists had to be rescued from their cars.

Summit County Countywide

21 1845EST 2 0 100M Flash Flood 22 0245EST

Thunderstorms dumped very heavy rains on Summit County causing catastrophic flooding in parts of the county. Rainfall rates exceeded two inches per hour at times during the evening hours. Many streams and creeks left their banks causing widespread flooding. Spotters measured 7.20 inches of rain at Richfield and a gage at Hudson High School record 3 inches of rain between 7:45 and 8:15 p.m. with a storm total of 7.5 inches. Five inches of rain was measured in Stow. Two men drown at approximately 8:50 p.m. in an underground parking garage at an condominium complex located along Atterbury Boulevard in Hudson. Witnesses indicated that the underground garage filled with water in just a few minutes. Nearby Brandywine Creek overfilled it's banks and flooded the complex. The creek rose at the rate of two feet every 10 minutes between 8 and 9 p.m. Flooding reached half way up the first floor of the buildings and around 80 residents of the complex had to be evacuated by boat. Bucket surveys upstream of the complex indicate that as much as 10.4 inches of rain fell on the 21st. Mud Brook left it's banks in the Merriman Valley neighborhood of northwest Akron and cut off an apartment complex on West Portage Trail. The three bridges leading to the complex were washed out trapping nearly 200 people. A temporary road was built and the residents were finally rescued late on the 22nd. Flooding also occurred in Twinsburg, Akron, Cuyahoga Falls, Peninsula, Copley, Bath, Boston Heights, Green and Stow. In Twinsburg, Tinkers Creek went into flood and damaged several dozens homes and businesses. Over 400 homes were damaged in Cuyahoga Falls by flooding. Most of the homes were in neighborhoods along 6th, 7th and Kilarney Streets. An automated rain gage in the area measured 4.60 inches of rain. Flooding affected large sections of Silver Lake and Stow forcing the evacuation of dozens of people. Spotters in Stow measured 6.28 inches of rain. Over 500 homes and around 30 businesses were damaged in Stow. Ten of the homes sustained major damage. People had to rescued from motor vehicles all over the county as hundreds of roads and bridges were either washed out or flooded. Flooding in Boston Township was the worst since 1913. Over \$1 million in damages occurred to public property and roads in Hudson. Another \$1.5 million in damages occurred to roads elsewhere in Summit County. Over 300 homes in the county sustained enough damage to be declared destroyed or uninhabitable. As many as 1,000 other homes and businesses sustained lesser damages. Damage estimates for the county top \$100 million

M18BF, M53BF





Time Path Path Number of Estimated Local/ Length Width Persons Damage Location Date Standard (Miles) (Yards) Killed Injured Property Crops Character of Storm

OHIO, North

Geauga County Countywide

21 1850EST 0 0 500K Flash Flood

Thunderstorms dumped two to three inches of rain on the southeastern half of Geauga County during the day. Lowland and street flooding occurred in that part of the county during the evening hours as several small streams and creeks left their banks. Many homes sustained minor flooding damage and nearly a dozen roads had to be closed because of flooding.

Portage County Countywide

21 1855EST 0 0 20M Flash Flood 22 0200EST

Thunderstorms dumped heavy rains on Portage County. Rainfall rates at times exceeded two inches per hour. Rainfall totals for the day exceeded four inches in some areas with highest amounts across the central portion of the county. Spotters in Kent measured 4.13 inches of rain by 8:30 p.m. and a total of 4.6 inches of rain fell at the water treatment plant in Kent. Mantua received 4.7 inches of rain by 9:00 p.m. and 3.6 inches of rain fell at Ravenna between 7 and 9 p.m. Extensive lowland and urban flooding occurred as many stream and creeks left their banks. The northern and central portions of the county were the hardest hit by the flooding. Knee deep water was reported over large sections of Ravenna just after sunset and bucket surveys indicate that as much as 7 inches of rain may have fallen on the city. Boats had to be sent to a mobile home park on the west side of the city to rescue 101 residents. Around 150 homes and businesses were damaged in Ravenna. Reports of up to 5 inches of rain were received from Aurora. Many homes were damaged in this area and several roads were washed out. The Holiday Acres and Pike Parkway neighborhoods in Streetsboro were hard hit with water in some areas up to four feet deep. The occupants of five motor vehicles had to be rescued. Kent was also hard hit with many damaged homes and washed out streets. Damage to roads and bridges in the county was near \$1 million. Hundreds of homes were damaged in the county and damage to private property topped \$20 million.

Trumbull County Countywide

21 1900EST 0 0 25M Flash Flood 22 0230EST

Heavy thunderstorm rains fell on Trumbull County during the evening hours. This was the second round of heavy precipitation during the day. The southern portion of the county experienced devastating flooding. As much as seven inches of rain was reported on the 21st with the southern half of the county generally seeing four to six inches of rain. Three inches of rain was reported in Warren between 6:30 and 9:30 p.m. A new all time calender day rainfall record of 4.65 inches was established at the Youngstown-Warren Regional Airport in Vienna Township. Over 7 inches of rain fell in the southeastern corner of the County with several five inch reports in Warren and 4.60 inches measured at Farmdale. Sections of Brookfield were flooded when Yankee Run Creek left it's bank. Flood waters up to five feet deep were reported with many cars swept off roads. Evacuations occurred at an apartment complex in Brookfield and also in portions of Hubbard where Mud Run left it's bank. Devastating flooding also occurred further west in the Girard, McDonald and Liberty Township areas. Dozens of roads were washed out and numerous evacuations occurred in the these areas. All roads were closed in Girard at 9:30 p.m. Dozens of homes were flooded in Liberty Township with damages to public property and roads topping \$1 million. Damages in Girard were also well into the millions. Flood waters up to four feet deep were observed in Vienna Township just south of the airport. Significant flooding occurred in Warren with dozens of homes affected. Two large factories in the city had to be closed and evacuated because of flooding. Finally, the Trumbull County 911 Center in Howland had to be evacuated around 9 p.m. when a basement wall collapsed allowing flood waters into the building. Flooding problems continued in the county until the 24th as the Mahoning River went into flood and caused even more damage. A total of 753 homes were damaged in Trumbull County by flash flooding on the 21st or the resulting river flooding. Of this total, 90 homes were declared destroyed or uninhabitable. Another 1400 homes experienced basement flooding.





Time Path Path Number of Estimated Local/ Length Width Persons Damage Location Date Standard (Miles) (Yards) Killed Injured Property Crops Character of Storm

OHIO, North

Medina County Countywide

21 1905EST 0 0 8M Flash Flood 22 0100EST

Thunderstorms dumped two to four inches of rain on Medina County on the 21st. Flash flooding occurred in portions of the county during the evening hours. 3.91 inches of rain fell in Chippewa Lake during with around 3.5 inches in the City of Medina. Over two inches of rain was measured between 6 and 7 p.m. in Medina. The flooding was most severe in Medina, Montville and Granger Townships. In Montville Township, the west branch of the Rocky River left it's bank and flooded several homes along River Styx Road. The river rose nine feet above normal causing a basement wall in the one of the houses to collapse. Several people were evacuated from homes nearby. At 9:05 p.m. a small child was washed into a flooded ditch in Granger Township. Rescue workers arrived quickly and were able to save the child. Extensive lowland and street flooding occurred in Medina with several roads damaged by the flood waters. Many homes were damaged by flooding in the city with areas along Smith Road affected the most. A total of 37 homes and 110 apartment units sustained major flood damage in the county. An additional 73 homes and two apartments sustained minor damage. Many businesses were also affected. Damage to public property, roads and recreational areas topped \$1 million. At least seven motorists were rescued from stranded cars during the storm.

OHZ023 Trumbull

21 2330EST 0 0 32M Flood 24 0600EST

Heavy thunderstorm rains on the 21st caused the Mahoning River to go into flood. At Leavittsburg, the river went into flood around midnight on the 22nd and crested at 17.16 feet during the early morning hours of the 23rd. The river went back below the flood stage of 10 feet at 7 a.m. on the 24th. At Warren, the river when above the 10 foot flood stage at 6 a.m. on the 22nd and crested at 14.88 feet just after daybreak on the 23rd. The river went back below flood stage at 6 a.m. on the 24th. Flooding occurred along the river in Trumbull County. Extensive damage was done in Leavittsburg, Warren and Niles. Evacuations were conducted in all three of these cities. Most of Leavittsburg was under water at the river's crest. The first major evacuation occurred at a mobile home park in Niles around midnight on the 21st. The flash flooding and river flooding created a heavy toll in Trumbull County. A total of 753 homes were damaged by flooding. Of these, 90 were declared destroyed or uninhabitable. Another 1,400 homes experienced basement flooding. 400 of these were in either Warren or Warren Township. Literally dozens of roads, culverts and driveways were washed out. Damage to roads, government or public buildings, parks and recreational areas topped \$4 million.

OHZ011-021 Cuyahoga - Summit

21 1900EST 0 0 15M Flood

Runoff from very heavy thunderstorm rains caused the Cuyahoga River to leave it's banks late on the 21st. The river crested at 12.64 feet at Old Portage around 10 p.m. on the 21st. The river fell back below it's flood stage of 9 feet just after midnight on the 24th. At Independence, the Cuyahoga River went into flood around 6 a.m on the 22nd and crested at 21.12 feet around 6 p.m. on the 22nd. The river fell back below flood stage early in the afternoon of 23rd. Considerable damage was caused by the flooding in both Cuyahoga and Summit Counties. Over 20 miles of foot trails, several miles of railroad tracks and eight bridges were washed out in the Cuyahoga Valley National Recreation Area. Damage in the park topped \$1 million. Significant flooding occurred along Canal and Tinkers Creek Roads in Valley View. Many homes on the east side of the river along Gleeson, Charles, Frances and Stone Streets sustained major damage. Flooding also occurred along the river in Cuyahoga Falls and Monroe Falls near Kennedy Park. Over 20 businesses along the river also suffered flood related losses.





Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Numb Per Killed	oer of sons Injured	Estimated Damage Property Cr	Character of Storm	July 2003
OHIO, North									
OHZ033	stage p.m. o dozen	2200EST 2100EST y thunderstorm ration for 10.0 feet at 11 on the 25th. The of	p.m. on the 2 crest was the l usinesses dam	21st. The riv nighest in Yo aged. Indust	er crested a ungstown s rial areas ea	t 17.49 fe ince Janua	et at 7 a.m. on t ary 22nd, 1959.	Flood Youngstown. The river went the 23rd and fell back below Significant flooding occurred ere very hard hit and water re	flood state at 10 l in the city with
Summit County Countywide	rain c		l already satu	rated from fl	ooding on t	he 21st c	aused streams a	Flash Flood o two inches of rain fell durin nd creeks near bankful or ali ound of flooding.	
Wayne County Countywide	heavy	rains that fell the	e previous day	y led to wide	spread stree	et and low	land flooding.	Flash Flood The combined Many homes sustained floods is had to be closed because of	ling damage. A
Stark County Massillon	22 Thund	1115EST derstorm winds da	amaged two ho	omes in Mass	0 sillon.	0	15K	Thunderstorm W	ind (EG50)
Trumbull County									
Countywide	rain c	•	l already satu	rated from fl	ooding on t	he 21st c	aused streams a	Flash Flood o two inches of rain fell durin nd creeks near bankful or alr ound of flooding.	
Portage County									
Countywide	rain c		l already satu	rated from fl	ooding on t	he 21st c	aused streams a	Flash Flood two inches of rain fell during creeks near bankful or allound of flooding.	
Mahoning County Countywide	22 Thund	1235EST derstorm winds do	owned trees ar	nd large limb	0 s across the	0 county.	25K	Thunderstorm W	ind (EG50)
Mahoning County Countywide	22 23 For th	2040EST 0200EST	a row heavy	thunderstorr	0 n rains fell	0 on Maho	2M	Flash Flood Two to locally four inches of	rain fell on the

For the second day in a row, heavy thunderstorm rains fell on Mahoning County. Two to locally four inches of rain fell on the county during the day. Rainfall rates approached two inches per hour during the evening hours. With the soil already saturated, this rain led to widespread flooding across the county. Boardman and the southern portion of Youngstown were the hardest hit areas. In Boardman, 15 homes had water up to the top of the first floor. Three other homes were destroyed when their basement walls collapsed. Over 60 roads had to closed due to flooding. Many homes and roads were also damaged in Youngstown. Dozens of



Portage County Countywide

27

1753EST

National Weather Service Storm Data and Unusual Weather Phenomena



July 2003 Time Local/ Path Length Path Number of Estimated Persons Width Damage OHIO, North vehicle became stranded in flood waters. There were numerous people rescued from their homes and vehicles. **Portage County** Countywide 23 1345EST 1900EST **500K** Flash Flood Thunderstorms dumped another inch or two of rain on already saturated grounds. Streams and creeks near bankful or already in flood quickly rose during the afternoon and evening hours. Widespread flooding was reported across the county. Homes near Mantua were reported to have as much as two feet of water on their first floors. Water up to three feet deep forced many roads to be closed near Freedom. OHZ013>014-023-032 Geauga - Ashtabula - Trumbull - Stark 23 1400EST 0 Flood 1900EST Thunderstorms moved across northeastern Ohio and dumped one to two inches of rain on already saturated ground. Widespread urban and lowland flooding continued across the area. Many streams and small creeks remained in flood and dozens of roads had to be closed. Basement flooding damaged hundreds of homes. **Hancock County** Arcadia 27 15K Thunderstorm Wind (EG50) 1505EST Thunderstorm winds downed several large trees limbs and a power pole near Arcadia. Seneca County Fostoria 15K Thunderstorm Wind (EG50) Thunderstorm winds downed a few trees and large limbs. **Crawford County** 1515EST Thunderstorm Wind (EG50) Countywide 27 15K Thunderstorm winds downed several trees. **Morrow County** Countywide 27 1520EST 0 0 15K Thunderstorm Wind (EG50) Thunderstorm winds downed several trees. **Knox County** 27 1545EST Thunderstorm Wind (EG50) Countywide 0 0 15K Thunderstorm winds downed several trees. **Richland County** Butler 27 1550EST 0 5K Thunderstorm Wind (EG50) Thunderstorm winds downed two trees. **Huron County** Norwalk to Wakeman 27 10K Thunderstorm Wind (EG50) Thunderstorm winds downed trees south of Norwalk and near Wakeman. **Lorain County** Countywide 27 1625EST 15K Thunderstorm Wind (EG50) Thunderstorm winds downed trees and large tree limbs in Amherst, Avon and Lorain. **Summit County** Thunderstorm Wind (EG50) 1700EST Hudson 27 0 0 50K Thunderstorm winds toppled two large trees. Both trees struck a house and caused considerable roof and wall damage. **Trumbull County Newton Falls** 27 1740EST 8K Thunderstorm Wind (EG50) Thunderstorm winds downed a few trees.

0

0

100K

Thunderstorm Wind (EG50)





Time Local/ Length Width Persons Damage
Location Date Standard (Miles) (Yards) Killed Injured Property Crops Character of Storm

OHIO, North

1815EST

Thunderstorm winds downed many trees across the county. Up to 9,000 electric customers lost power during the storm.

Mahoning County Austintown

27 1800EST 0 0 110K Thunderstorm Wind (EG50)

Thunderstorms knocked down and destroyed a carport at an apartment complex in Austintown. Ten vehicles parked underneath the carport were either damaged or destroyed.

Mahoning County Campbell

27 1810EST 0 0 5K Thunderstorm Wind (EG50)

Thunderstorm winds downed two trees east of Campbell near Coitsville Center.

OHZ020-029>031 Medina - Richland - Ashland - Wayne

27 1810EST 0 0 900K Flood 2100EST

Thunderstorms moved across the region during the late afternoon and evening hours. Heavy rains accompanied the thunderstorms with rainfall rates of nearly two inches per hour with the stronger storms. The heaviest rains fell in southern Medina and northern Wayne Counties. Two to four inches of rain fell in these areas with slightly lesser amounts in Richland and Ashland Counties. In Medina County, 3.3 inches of rain was measured near Chippewa Lake with 3.08 inches at Wadsworth. An automatic gage near Wooster measured 2.8 inches of rain between 6 and 7:30 p.m and 2 inches of rain fell near Butler in Richland County. Widespread street and lowland flooding occurred in all four counties. Many roads had to be closed. Dozens of homes experienced basement flooding.

Stark County Countywide

27 1815EST 0 0 52M Flash Flood

Thunderstorms dumped two to four inches of rain on Stark County during the early evening hours with the greatest amounts in the northern and central portions of the county. Rainfall rates peaked at more than two inches per hour and spotters measured nearly 3 inches of rain in Jackson Township between 5 and 7 p.m. For the day, 3.94 inches of rain fell at the Akron-Canton Airport just north of the Stark County line. A maximum of 4.50 inches of rain was measured in Louisville with 4.00 inches at both Massillon and in Lake Township. 3.5 inches of rain was measured at the Canton Water Plant. Some of the worst flooding in the county occurred along the east and west branches of Nimishillen Creek. The creek left it's banks during the evening hours after rising six feet in two hours and crested at an all time high of 14.07 feet at North Industry at 6:35 a.m on the 28th. Communities located along the river including North Canton, Canton and Louisville were devastated by flooding. Over 300 people had to be evacuated from their homes in Canton with dozens of others forced from their homes elsewhere in the county. In Louisville, the worst flooding occurred in areas west of Broadway Avenue and north of Eastland Avenue with over 100 homes affected. Emergency personnel rescued several people from rooftops and trees in the town. A man was rescued from his truck after it was swept off the road by flood waters around 6:30 p.m. A total of 36 people were displaced from their homes and 16 business in the downtown area were devastated by flooding. Damage in Louisville and adjacent Nimishillen Township was nearly \$10 million. In Canton, the worst flooding occurred along Mahoning Road NE between 9th and 12th Streets and in the Cook Park area. Most of the 300 people evacuated in the city lived in these neighborhoods. Hundreds of homes and business were affected by flooding in the city. A large factory located on Beldon Avenue sustained over \$5 million in flood damages. Over 120 homes were flooded in North Canton along the west branch of Nimishillen Creek. Just south of Canton in Canton and Pike Townships, two dozens mobile homes were destroyed by flooding along the creek and around 30 homes were damaged enough to be declared uninhabitable. Around 25 people had to be evacuated from an apartment complex in the southwestern portion of Lake Township. The Tuscarawas River went into flood at Canal Fulton and Massillon and damaged many homes. Mudslides occurred at several sites near the river in Lawrence Township. Sandy Creek went into flood at Minerva and damaged many homes. Scattered areas of flooding and damage were also reported across the remainder of the county. Over 1,000 homes and 500 vehicles were damaged by flooding the county. At least three major bridges were washed out and damage to roads was over \$3 million. Damage to homes and businesses in Canton alone topped \$25 million.





Time Path Path Number of Estimated Local/ Length Width Persons Damage
Location Date Standard (Miles) (Yards) Killed Injured Property Crops Character of Storm

OHIO, North

Summit County South Portion

27 1815EST 0 0 750K Flash Flood

Thunderstorms dumped two to four inches of rain on southern Summit County during the early evening hours. Rainfall rates were greater than two inches per hour at times. For the day, 3.94 inches of rain fell at the Akron-Canton Airport in Green Township. With the ground still saturated from flooding the previous week, streams and creeks in the county quickly rose and flooded many areas. The flooding was most severe in Green Township where at least six families had to be evacuated from their homes. Many other homes in the Township were damaged by flooding and several roads were either washed out or had to be closed.

Trumbull County South Portion

27 1917EST 0 0 6M Flash Flood

Thunderstorms dumped two to three inches of rain on southern Trumbull County during the evening hours. Rainfall rates of nearly two inches per hour were reported. With the ground still saturated from flooding the previous week, small streams and creeks in the county quickly rose and flooded many areas. Communities in the southern portion of the county were again the hardest hit. Mud Run Creek left it's banks in Hubbard and flooded areas along Main Street and on the north side of town. The creek washed out a bridge on Bell Wick Road near Mount Everett Road. The creek rose several feet in less than 30 minutes and heavily damaged over 30 homes and businesses. Many other buildings sustained minor damage. Several children had to rescued from flood waters in a park and numerous people had to be evacuated from their homes. Widespread flooding also occurred in Brookfield Township with water in some locations as much as four feet deep. Liberty Township was again hard hit with between 50 and 60 homes flooded. Water on roadways was as much as three feet deep and the residents of a nursing home had to be evacuated. Around 10 people had to be rescued from stranded vehicles in the township. Damage to roads in Liberty Township was around \$1.5 million. McDonald and Girard just to the west also experienced terrible flooding. Dozens of homes were flooded forcing the evacuation of many people. Basements in at least six homes in Girard collapsed. Over two inches of rain fell in the Newton Falls area flooding many roads. Total damage to roads in Trumbull County from July 21st to July 27th topped \$5 million.

Mahoning County Countywide

27 1920EST 0 0 8M Flash Flood 2300EST

Thunderstorms dumped up to three inches of rain on Mahoning County. Rainfall rates of nearly two inches per hour were reported. With the ground still saturated from flooding the previous week, small streams and creeks in the county quickly rose and flooded many areas. The north and east sides of Youngstown were among the hardest hit areas in the county. Extensive urban and lowland flooding occurred in these areas. Around 9 p.m. a fire truck responding to a fire on Andrews Avenue on the east side of Youngstown was washed off the road by flood waters up to two feet deep. 17 buildings on the Youngstown State University campus were damaged by flooding. Severe flooding also occurred in Campbell, Struthers and Boardman. Many homes and business in these communities were damaged by flooding. Dozens of cars were stranded in the county. Total damage to roads in the county from July 21st to July 27th topped \$3 million.

Portage County Countywide

27 1935EST 0 0 500K Flash Flood

Thunderstorms dumped one to two inches of rain on Portage County during the evening hours. With the ground still saturated from flooding the previous week, rapid rises in streams and creeks occurred. Many roads were flooded and at least two dozen homes sustained minor flood damage. Several vehicles were stranded in flood waters up to two feet deep. In the Charlestown area, a vehicle was swept off of a flooded road. The occupant swam to a tree and was later rescued.





Time Path Path Number of Estimated July 2003
Local Length Width Persons Damage
Local Milks Persons Damage
Local Milks Persons Damage
Local Milks Persons Damage

OHIO, North

OHZ032 Stark

Thunderstorms dumped two to four inches of rain on most of Stark County. A maximum of 4.50 inches of rain was measured at Louisville with 4.00 inches at both Massillon and in Lake Township. 3.5 inches of rain was measured at the Canton Water Plant. Significant flash flooding occurred along the east and west branches of Nimishillen Creek. The creek left it's banks during the evening hours after rising six feet in two hours and crested at an all time high of 14.07 feet at North Industry at 6:35 a.m on the 28th. The creek went back below flood stage during the late afternoon hours of the 28th. Communities located along the river including North Canton, Canton and Louisville were devastated by flooding. The previous highest crest was 11.3 feet on January 22, 1959. Record keeping began at North Industry in 1941.

OHZ033 Mahoning

27 1900EST 0 0 Flood 28 1800EST

Thunderstorms dumped up to three inches of rain on Mahoning County causing the Mahoning River to go into flood for the second time in less than a week. The river went above the flood stage of 10 feet around 8 p.m. on the 27th and crested at 14.45 feet around midnight on the 28th. The river went back below flood stage during the evening of the 28th. Industrial areas along the river in Youngstown were again flooded.

Lake County
Painesville to
Concord

31 1602EST 0 0 300K Thunderstorm Wind (EG50)

A thunderstorm downburst downed dozens of trees and damaged several homes. The damage path began near Liberty Street in Painesville and continued east along Prouty Road to near State Route 44 in Concord. A mobile home was crushed by a fallen tree in Concord.

Ashland County Ashland

31 2100EST 0 0 250K Flash Flood 2330EST

Thunderstorms dumped two to threes of rain on the central portion of Ashland County in about 90 minutes. Lowland and urban flooding occurred over the northern half of the city of Ashland. A mobile home park was under as much as two feet of water during the peak of the storm. Many streets had to be closed in Ashland because of flooding. Dozens of homes experienced basement flooding. Several cars were also damaged by flood waters. State Route 302 was closed for several hours to the west of Nankin

PENNSYLVANIA, Northwest

Crawford County Countywide

21 1230EST 1 0 30M Flash Flood

Heavy rain began falling during the morning hours and continued into the afternoon. Rainfall rates exceeded two inches per hour during the early afternoon hours. Spotters reported 2.5 inches of rain in Saegertown between 1:00 and 2:30 p.m. and 2.2 inches of rain in Titusville between 2 and 3 p.m. Total rainfall amounts through late afternoon generally ranged from 2 to 4 inches in Crawford County. Rapid rises of streams and creeks occurred as the ground was already saturated from persistent rains earlier in the month. Devastating flooding occurred in Cochranton, Titusville, Meadville and Saegertown. A bridge just outside of Cochranton on State Route 285 washed out around 2 p.m. Three cars were swept off of the bridge and into French Creek. One person drown, but emergency personnel were able to rescue the occupants of the other vehicles. Dozens of homes and businesses were damaged in Cochranton and many people were evacuated. In Titusville, Church Run a tributary of Oil Creek left it's bank. Residents on North Franklin and West Mount Vernon Streets were evacuated from their homes. Dozens of homes and businesses were damaged in the town. Widespread street and lowland flooding occurred elsewhere in the county with water is some areas up to 5 feet deep. Many roads and culverts were washed out and over 50 people were rescued from their homes and vehicles. M?VE



Erie County

National Weather Service Storm Data and Unusual Weather Phenomena



July 2003 Time Local Path Length Path Number of Estimated Width Persons Damage PENNSYLVANIA, Northwest **Erie County** Mill Vlg 21 0 0 250K Flash Flood Heavy thunderstorm rains fell on the southeastern corner of Erie County during the afternoon hours. One to three inches of rain fell on soil already saturated from persistent rains earlier in the month. Runoff from the heavy rains caused French Creek to leave it's banks and flood much of Mill Village, a small town south of Waterford. One to two feet of water was reported on many streets in the village. Several homes and vehicles were damaged. **Crawford County** Countywide 1330EST 0 100K Thunderstorm Wind (EG50) Thunderstorm winds downed many trees and large limbs across the county. **Crawford County** 2000EST Countywide 0 0 10M Flash Flood A second round of heavy rain fell on Crawford County during the evening hours. Rainfall rates well in excess of an inch per hour combined with soil saturated from the earlier rains led to a second round of flash flooding. More roads and culverts were washed out, especially across the southern half of county. Evacuations initiated during the afternoon storms continued through the evening hours. Hundreds of people were displaced from their homes. Rainfall totals for the day were generally four to six inches. 4.07 inches of rain was measured at the Meadville Airport with 4.90 inches at Linesville and around 4 inches at both Saegertown and Cambridge Springs. Bucket surveys in the Cochranton area indicated that at least 5 to 6 inches of rain fell during the day. Several hundred homes and businesses were damaged or destroyed by flooding and damage to roads was extensive. **Erie County** 1345EST 250K Flash Flood Countywide 22 0 Thunderstorms moved across Erie County and produced one to two inches of rain in a very short period of time. This rain combined with saturated ground from rains the previous day led to widespread lowland and urban flooding. French Creek left it's banks near Mill Village and flooded a neighborhood. Residents of eight homes were evacuated about 5 p.m. Hundreds of homes across the county experienced minor flooding and several roads were washed out in the southern portion of the county **Crawford County** Countywide 1500EST 250K Flash Flood 22 1830EST Thunderstorms moved across Crawford County and produced one to two inches of rain in a very short period of time. This rain combined with saturated ground from rains the previous day led to another round of flooding across the county. Streams and creeks near bankful or already in flood rapidly rose during the late afternoon hours. As a result, many homes and roads were once again flooded. PAZ003 Crawford Flood 0 0 23 Thunderstorms moved across Crawford County and dumped one to locally two inches of rain on already saturated ground. Widespread urban and lowland flooding continued across the county. Many streams and small creeks remained in flood and around a dozen roads had to be closed. Basement flooding damaged dozens of homes.

Countywide 31 1730EST 0 0 400K Flash Flood 2000EST

Thunderstorms dumped one to three inches of rain on northern Erie County during the late afternoon and evening hours. 1.75 inches of rainfall was measured in Lawrence Park by 6 p.m. with a storm total of 2.06 inches. 2.10 inches of rain was measured at





Time Local/ Length Width Persons Damage
Location Date Standard (Miles) (Yards) Killed Injured Property Crops Character of Storm

July 2003

Killed Injured Property Crops Character of Storm

PENNSYLVANIA, Northwest

Northeast. Urban and lowland flooding occurred across the northern half of the county. Many roads and streets had to be closed. A road in Mill Creek was washed out just after 6:30 p.m. Nearby, a mudslide at a construction site damaged a few homes. Dozens of homes in the county experienced basement flooding.